

# (19) RU (11) 2!122!848 (13) C1 (51) MnK6 A!61!H!39106

POCCI4171CKOE ArEHTCTBO nO nATEHTAM N TOBAPHbIM 3HAKAM

### (12)Of1MCAHVIE! 1/13OBPETEHM1!Kf1ATEHTY! POCCVIVICKOO! (I)EAEPALIMM

- (21), (22) 3aslBKa: **4954402/14**, 24.06.1991
- (46) gars ny6nHKaL.w: 10.12.1998
- (56) CcblnKH: 1. **ABTOpcKOe** CB11 **eTenbCTBO** CCCP! N 1602528, A 61 H 39/08,! 1987.! 2. ABTopcxoe canAeTenbCTBo CCCP! N! 1553126, A 61 H 39/06, 1988.! 3. 3asIBKa **flnOHHH N! 63-34745,** Kn. A 61 H! 39/00,! 1988.
- (71) 3aABHTenb:
  Y4e6HO-Hay4HO-npOH3BOACTBeHHbIN na3epHbIN
  LteHTp CaHKT-neTep6yprCKOro HHCTI.TyTa TO4HO4t
  McXaHHKK H Of1THKH
- (72) 143o6peTarenb: AflbTWynep F.5., BecenoBcKHN A.6., MHTpojaHOB A.C., Vec HnoB 4)pali6epr B.C.

U

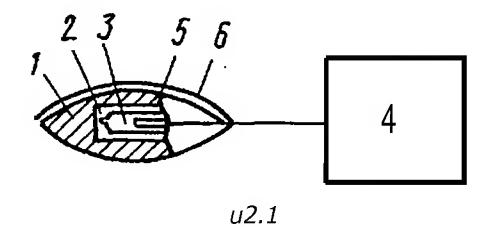
(73) f1aTeHToo6naµarenb:
Y4e6HO-Hay4HO-npOH3BOE{CTBeHHbM na3epHbIN
L{BHTp CaHKT-neTep6yprCKOrO HHCTHTyTa TOHHO14
M2X9HNKII II OfTTNKH

#### (54) YCTPONCTBO JJJ151 PEPnEKCOTEPAfHVI

(57) PeCpepar:

I<sup>1</sup>13o6pereHl4e K o6nacni OTHOCHTCA Meg14L{14HCKOI4 **MONCeT** 6bITb TeXHHKH Н HCnonb3OBaHO ,gflR npoBe,geHHA npOCpbinaKTllYeCKLIX N neYe6HbIX npoge,gyp e Ka6HHere peCI)neKCOTepanlly. 14306peTeHHA -nOBbiWeHIle 3CxCOeKTHBHOCTII ne4eHH51 3a C4eT OrAHOBpeMeHHOro O6ny4eHHA aKTHBHblX TO4eK 11311y4eHlleM 611O1IOfH4eCKV1 cneKrpanbHOfo COCTaBa pa3nH4HOf0 npOHL1KHOBBHIIA yBenH4eHHA rny614Hbl 143ny4eHHA B Teno nau 1eHra 6e3 yBenhl eHl1A MOLLAHOCTII 1,13ny4eH1151. nOCTaBneHHa5 L{enb / ocrllfaeTCA TOM, 4TO B ycrpol4CTBO, qnn peclneKOOrepanHH, cocrontllee 113 3aKpenneHHOrO Ha Tene nat{HeHra pa6overo 3neMeHra, cogepKau..4ero HCTO-HHK 143ny'eHHA onlH4ecKoro ,giana3oHa, 3neKCTpH4eCKH CO@/ I4HeHHOfO С 611oKOM fHTBHHA н yflpaBneH11A, **BKfI04eHO** N pa6oLmx 3neMeHTOB, Ka)K,D,bI14 H3 KOTOpbIX cHa6NCeH BbinyKnOVI Manora6apvTHol4

11HH3014 113 cBeTO011nbrpylOLL4ero Marepllana C fOf10CTblO, B KOTOpON paCnonONCeH HCTOLIHHK 1,13ny'ek14A. AnA nOBblWeHNA 3ClCjDeKTHBHOCT14 11Cnonb3oBaHllA CBeTOBOl4 3HeprNN, Bblpa6aTblBaeMOV1 HCTO'HHKOM 113ny4eHl4A, Ha 1IOBBOXHOCTb n1.lH3bl He npHnerarou{ylo K reny na14HeHTa, HaHeCeHO orpaNCaloiyee nOKpblrlle. JJf1A pOnOnHNTenbHOrO nOBblWeHHSl 3CxCpeKT11BHOCT11 ne4eHHA NCTO'HIIK 14311y9eHHS1 BblnOnHeH nepecrpaHBaeMblM n0 vaCTOre H3ny4eHHA. 2 3.n. c -nbl, 2 Pin.



O



## (19) RU (11) 2 122!848 (13) C1

(51) Int. C1.6 **A 61 H 39106** 

#### RUSSIAN AGENCY FOR PATENTS AND TRADEMARKS

(12)

### **ABSTRACT OF INVENTION**

(21), (22) Application: 4954402/14, 24.06.1991

(46) Date of publication: 10.12.1998

(71) Applicant: **Uchebno-nauchno-proizvodstvennyj** lazernyj tsentr Sankt-Peterburgskogo instituta tochnoj mekhaniki i optiki

(72) Inventor: AlYshuler G.B., Veselovskij A.B., Mitrofanov AS., Fefilov G.D., Frajberg V.S.

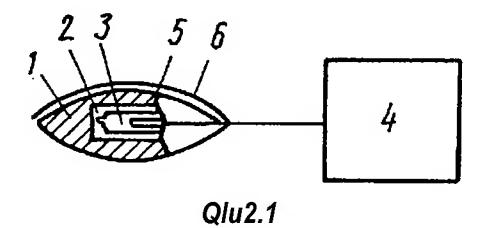
(73) Proprietor: **Uchebno-nauchno-proizvodstvennyj** lazernyj
tsentr Sankt-Peterburgskogo instituta
tochnoj mekhaniki i optiki

#### (54) REFLEXOTHERAPY DEVICE

#### (57) Abstract:

FIELD: medical engineering. SUBSTANCE: reflexotherapy device consists of operating element secured on patient's body. Operating optical-range element includes radiation source connected electrically to power control unit. Reflexotherapy supply and device contains N operating elements. Each of them is provided with small-size convex lens made of light filtering material with cavity which accommodates radiation source. To raise efficiency of using the light energy generated radiation source, by reflecting coating applied lens is to surface nonadjacent to patient's body. To

enhance treatment efficiency, radiation source is made retunable as to radiation frequency. EFFECT: enhanced efficiency. 3 cl, 2 dwg



U

IV

Z Z 0

СО

0

-Pk

09

99

09

96

06

9e

os

9Z

OZ

01

9

Hloeugo N HO1HOOHIO

eHHaladgOCV

NahOl

HHHBheLI

'eee1000

	ongoainnuouou emiigunou aatnoien <edio< th=""></edio<>
	OH808HBH e1Ha141 IBU /11181 N Hafiolelaumdu aH
	19£H1411 9100HXde80U eH 1514H0hA11E14 WONHHhOlOH
	vlowaeal9legedl <sup>g</sup> e 'HHJdaHe moeol000
	HHHe00£9U000H H1oOH8H1Noc)7Cpe H14HamI98ou
	HU'V 'HHHehl1U£m NMHhO1014 HON<011000ed lelodoioN
	a ol9loouou o euemdalew olafiolAdiqumdtolaeo
	£m 00£HH1f MOH1HdegeJOUBW
<u>ن</u>	mou NAU198 HaN < gOHO 1HOWOUE O1HhOged 01111weN
	HmHaueedwc H HHHBIHU wONOUg o 019HH8Hmtt0oa
<b>~</b>	mNOehHdlNaUE HHHahALJEH )I14Hh010m
	xHtneNCdeVoo 'a01He eLce xmhoged e1H8HhBU
<b>2</b>	81181 eH a19WaHUuedNec Hgao a watnoleholuNe
<b>&gt;</b>	mmuede1ooNau(bad Hutt ealoHodloA
	8 Olh Wa1 <b>H01e0Jm10017</b> 9U8h <b>HBHHOLf8e100U</b>
<del>00</del>	HHHOhAUEH ONIIHhOIOH H100HtT10W
	HHHahHUa8l1 Cog 81HOHheU 01101 8 HHHOhAUEm
4	HHHa80HNHHOdU 19HHgAUJ HHHOh41L10EIA m B8BI000
	OJOH <sup>9</sup> UBdnlouO OJOHhmUEBd WOMHOhAUEm HOE HUM
	NahOl xi elH0m1Ne HNO8hMJ011014g 0HHe1AIed8OHtt0
	HHH0h/1UgO lahO eE HHH8hOU H100H8m1N8C#)C)JE
	emHem19eou - HHHaLedgo£H 9Uat~
C)	eOdHON moloo198 eowaauetteduo
-,	eHHH0100Bd eH eoodNou OJOH)KONLA10OHXda000
	10 OHOLfettAA P.1oda£e11 WOH eH 1119HHauUBdNe£
	O 011He80HOO N'I HHH9hA11£H HHHBBOHNHHOdU
	AHmgAUJ OJOle lehO ee 91em190ou
	m BIHeHhOU 01101 8 HHHehAU£H et" 'OX8 eioeW 8
	HHBNI VIONOehHJOUGHg OHHOHIOUIJA 91mtt08£modu
	10H1108E0U OH ealoiodlo/( mlOeh Llahoged
	ewdoo 'eee1000 OJOH911ed1N000 OJOHhIU£ed
	WaHH9hA11£H NahOl X19H811Jlle HNOOhHJOIJOmg
	ON9UONOOH 91eh/tilgo 10HLfOBEOU OH HHHehALf£m
	0JOhiOleheugo 10et1 91HH81AIEH 181iU08COU
	OH edeeeu O1080NHHt'080duAl fol HHHebAl IFm

BN14Hh01014 08100hON a eHHB80E9U00014

W1980HHEad

OJONoehHULf leW

WOHOULfeg

eNa8011ah

**HODUOdNBE** 

wmhloiiUoe£ou

eoNOahmUUelaw

e0OdNou

Hutt 1414HB80HOO 8 BUBHB)I m HHHe00HOO

Axdaeo

01h BMAHON Hdl/1H8 exAtt000 HHHONCHd£ed

lahO BE Ho1eKU81o9 mcoO HIOeh 09hoged

WOOAUdON

a

OJOHN<ON

mlogoo

**8HH8UUed)** 'woda£e11 H wOHeJdo wl91NaehAugO

Atti<aw aHHHOIOOed eoneAgedl 91eamLfueHeloA

10 OOHHO110tt10 'daeeU 01980NHHtt080duAuou

WodoloN

eeloHodloA 91oeh Hehoged eumlolodu

'BXIcttCOa HHHe819oeoe

W19HH8UUadNee

WIOHH9WO

1410oHXd0BOU

laHUeeloVedu

8HHe80H0o

'wodeeeu

Holeeemhauoago

leom198OU

ItNh01

mNmJNedu

olmdalmdN

Hutt

OH0110le801/OLIO

HmHam198ou

OI1181000ttC0e

01h

WOHHau8ett WHNOahHHBXOV

(HlehtteHoBh

AW0HHe1<sup>s</sup>I0d8OHVo

X19HBHJ)1e HNOOhHJOUO41g ON9UON0eH lexeu dOU

eooehodu e N HHHe8000ge£ 10 14100WH3H8e£

oJOH<sup>9</sup> Ued1Nau0 OJOHhHU£ed (W01080) OHOEBUBHt/

OJON08hH1U0 010HH8hAUEm WONO1 IIHN08hHd1NauE

'wot1ouox mum wouuei '(N<eooew 'ed/Soodeube)

eH 14HeloNattC08 mdu H01aeJmloott iNacpl:)e

(00NOHmhHtteW)

019Hg8h8Lf 01h OH1088EH mmuedelooNeut)ed

Hhette£ HmHemad OJONO8hVHXOI oJOHHeNCOUtdadu

01010eh Ou oJo&eeamedloadeu 8HH880£9u00014

leHUOaCOU HHHaheU 9100H8H1NoCfC a 91moneou

amHe80£9U000H OHON<11doHgO OH Hwedoley

01/1HBH1Ne

loAaloieel000

oalovlodloA

8 HHHB81911ENA0UJH w01101aw H14HOha11 mdU

Ott)

WeHHe819UeNAOUJH

'"HmhH1710 a19HHea1081T1110"

1514H8h8U **H100H8H1)IOCjCf1e** 

Hu17 mmuedalooNeu4 ed

HHHOh/1UE14 eNHHhOIOH HHHahALfEH

mHuedelooleucDad

eoHHaXouttadu

HN08hWO110Hg

W190oNHHtt08oduAuoU N WOHBJd0 W19Waeh/cug0 AtN<ew amHHolooed oov eAgedl 91e8HLf0BHBIOA OHtnO115UO9£0U 011HON N19HHOWO HOlaKUUadNNdU BttOHtt **OJOHda6BU** 19HOdO10 *oo* OIHHe90HOO 'exA171£oe BHHee190008 Hut? uOHON H01aawH HHHe80HOO WO)108hWUUel8W 8 WOHO11Lfeg W1980HHEad o OH0H1,1tt000 aodoloN HHHB80HOO INON0ehHUUe1OIN BH N19WaHUUadNee (OHO£OUBHV 0JOH08dNedI HH) deEeU HI980NHHt7000dU/1UOU Hgao 8 Ieeholu)Ie oel0mlod10A '88 LO Z L UgAuo 0016£ H L9 V t7N '(HHHoutj) 9tLb£-E9 N ONeHB£) HHUedal MOHda£B11 Huts oelomodloi( Holaedmgl9e eumlOiodu 80100h0N 'WBUJH W19HhBdEOdLI HNOahlIUO N edecoi 10 Lnowaeeettadau HHJdaHe rnoeolaeo Hdalou -/1NhOl OfAHoHJ11B HNOahHJOUGHg 8 H14HOh11U£H HHHetdeUOU 9100HhO1 HBN£VH -'UJm 11vHeVa99 Hdu HHHetni tflO 019H1HHdUGH H OIHOHtIOU H14He00dHt1mcfDH11 9100H)KOWE08 -(80108h X19HhHLf£ed) HUOB HHLItt XIOHhHU£ed 111010e0 19dA1NHAUbe NehOl O)19110NO8H 0HHOWad80Ht10 9100HN<0W£000H Hmalomett£Oe (eleah) I9HL08 I9HHUtt 00010 ON911o1 HHHOhAU£H OHH090EgU000H -:1101aHUeH ealovod.Lo, oJOIE woNlelootteH 191HOWeUe 819HgLfOle0adJBH H 19UJH 019HhedEOdU HNOahm&UO 019HHOH'I1N89.HH a19HWa9.0 | clHOU80He1o/1 НННОВОНОО еН 'HHHBUUadN mWe1H8WO116 O OHH8BOHOO OOHhHIOBUC 1HN<dOttOO ooloHodlo/( '19HO£ 019HHOJ00)18Lf(ted BH Hwedlawedeu mwl9waAdH11AJad HWHN9u0NO0H am810matt£08 OOHONauuwON 0IHtn01eeHheU08gO 'doleNmuuue HO19lt£9U000H HNhOl 019H814 Ne HNOOhHJOUGHg eH W8HHeh/c11£m W19Hd0EOU 111,1810H0tt£08 Hut' eoIOHodlOA WO1e 8 '(99'9O'9 10 90/6C V UN 9LLfi991, N o'e) HHUeda1ooNaucDed HLftt ooiomodloA OONOahHIUO OH1088£V 'AHH9AL1J olltm911og eH 19UJH a19HHOmt1Na9.HH oietni 1oaa 'ehede HHheNm(bHUeON HeNool<sup>9</sup>e HoIe,cgedl -UJm 14HHOt108B Hdu HHHatfhht110 a19H1HHdUGH aN0101 a OIHOHhBU HHHBBOdHt1H(~HH 910OHN<OWEO8 HO10HU8HOU UJH X19HHOHt1Na9.Hm 1,114He80£9U000H Hdu aNhOi moWeohAugo N edoledIHehHON 10 Alloeoleao ou Howaeeettedeu 'HHJdaHe moeolaeo Hdalou ammauog -(eleeh OJOHhHUEed) H1108 HHU1I XI9HhHUEed WOIO80 NahOl ON9UONOOH BH OHHeW9d8OHt/O 9100HN<0W£080H HH810metteoe WOlaBo W19uaq ON91JOI 19dAINHAU/1Ne MNhOI BH OH8100at'EO8 -:H01aHU8H ealovodl.Olc oJole INONlelO01'1OH 'Wottoeoioao /cUBHBN AWOH9LfedIHeh OU H01I9HHeN<O110dU I9UJH 019HHOHt1NO9.H14 0 H0101AequouoH N8hO1 XI9HEWIDIB HNO0hHJO11OHq xmfiOleJOU'e£ ONOg/1UJ BHHehl111g0 Htlt] 'NehOl X19H814JJIB HNOehHJOUGHg Hloeugo a Holo4HUUedNee X19doloN 19t1doI aotttoeolaeo Xmtmsdoaeed N011g lloeol880 H080UH0 ood1911mcp xHtnoletnoulou NOUg HUH HEOIUBN< 13HHeh/1uCH H10oHh1OW Nmhlett dOledhHahHON 11IN<dettoo oalomodloA '(L8.90"Z0 10 90/6£ H 19 V uN 9Z9Z09 L N 'o'e) W01880 W19HheHU00 19d/1JNH/ U/1Ne **HNhOl** BH **HH810%18**t'**E08** OJOHHBBOdHEOtt Hutt oeioiiodlol( aONOOhHIUO OH1088EV 'BHOEBUBmtt OJONO0hm1UO WBmHOhIUEH 19H0£ Η 019H8m1Ne HNhOl HNOOhHJOIJO149 eH H1,101000tt£08 wo810tt0dooU ddttahodU X19Hg8h8lf H XHN09hHfNBUWC IOdU HHHetteoodU Hutt OHOhOH£eHttedU H IINHHXal 00NOHHhmt8W

O

09

99

09

9b

Ob

99

Ng

9Z

0e

06

9

OalnoelaHJA

Nei

Wole 14dU ANhOl AHt10 OH W8N810V1a11eO8

0 OI14HOH8Od0 OU K14HOh0u 9100H811INOC1)C#)e

NON

'(ooh1oAdi1AW141o)

I0laA£9uouO14

N

eafi01e1)1<Aq£oe

9 y eaNCeaIdU) OHO£BUO1411 oJOwH17tn8 elaeh OJOHOOdN aIHahAU£I N WNW , 19HU08 140H11ut1 0 eIHehAU£I eOHOedNedcf)H14 1801101180 aHOeeueI1I WON09h1411.10 8 **019100H9000U0** ah101eNIHOdU 09m1u0914OH -iaeioedeoe 9HO£euew17 14101AI1417118 8 0,1914H9h14UO8A 99 0 14 K14HohAU£1 19HUO8 19HNU17 10 11101480£ 14NhOl a1NOanvuouoNg a11HahAu£14 KNH88OHN1HOdU OH14qALIJ (WO!L-8) 80dIOW141He0 X14N911oNoeH OJOHNCON 14100HXd98OU 10 0H11QALTJ 0d010NoH OH KOIK17OXOH 14NhOl 919H8141Ne 14NOah11JO110149 KIHahA1J£14 1HH880HN14HOdU 19HNgAUJ 10 11100W1401180E 8 -I9HIhI11aW IOHhOIOO8 14WKIHOl8elottedu 11 W I9HHO111111Tledl 0 14148101881000 8 'edeinollf WOlOal o ,1148101981000 8 -0188h OJOH11 NUN OJOI K148100811£08 OJON09h14JOUOI£1ICf) 08100HH89000 11100 W**N01180**E 10 80U141lH14du X14hloiAteuO £N WOH'do eH HOSOH0O 91198 18NCOW KVHOhAU£14 OJah1O1A810HatiCO8 OHO£0Ue1417 0JOH91led1N8U0 doq198 (XI 9861 · 'eNNHxel h eNAeH NOH141N K14HahAu£14 OJOHdOeeu OJOH8140HOIH140N£14H 910OH8NJ)IeCD( e KeN08h1418auedei eouxoX 80NVH801001N '3'y NOId)I) eJNat/ct:le OJOH9Ohau 91AHJ1410017 10K1508£0U 14100HUAN0800 N Nei 1100H'Uat710 8 NON 1N810Ne deoe X1410 014 aotri<e)I (eahtolAdVuAw141o) eafioletlNCAg£oe A 1980 019HOedN a 'OIelo1al1eoe (eahtI£owdoi) eatnoeleHJA 18e819£BNO 1419H9UOE 1980 014H110 'ANhOl OIAHBNJ)le 11N08h14J0U0119 ev8io01e17**E**08 oAWaehAUg0 OH 90Hh14Lf£ed 1ae819EeNO **0801000** OJOH91Sed1N000 OJOHh14U£ed eHOEeUeI11 OJO)108hIIUO 914H8hAU£lil '('11'1 14 XCe00ew 119HHoH1IU N HIgHhahol 'edAINHAuoWdal edAooeduANe) 1414n01 a19HSNJJle NNOanwouONg eH K1810Ha17e08 IWetIOlaW 1WNJAdl7 o 1414He19h00 8 14 Nei IIooH9ue1710 8 NeN eHO£eUB1417 **OJONOahIIUO** KNH8hAUEN 141481014811£08 KOHHO80HOO 'K14UedelooNautadolo¢) K01aIU8I 8011018W XINe1 EN WNH11Q (19dAINHAuANe 0NOenviooe f 141heNVCf)1417ow) mho' anHemiNe 14N00h14J0U0149 OH K11810H811C08 810140d10A 14 8011010W X19H81410Hd819Ue N0140U ieAdIUAW14l0 Olh HWeoAdI8 1WI9Hh1Ueed KMHeeodV11w H14 O**E-**£14 14IOOHNCOWE08 IS0190N(A0 made 99111K010OH 8 15141-19h8u A1101aW AWOH814J.N9C 4De AWOle N x1InoleJagIdu 801H8Hheu JAd)I ewHB819UeNA0UJN oietht1 oeodu ehede K14heN14ctmue8N KBNO0198 lol8Aged1 -(19H911LA11118I111H11 oH911a1eueN1<) ANhOI oAH8141J1e NNOahNJOUONg KNHBt1e000 OJOHhOl 9100H17Ad1 -K14Hah1Ah10 eIcHIK14duaH -11Nh01 aNC 81 14 1411110 N UJN 141114017888 WOH1edNOJOHW 14dU H0H0N1 XVN09h14JOUO149 o14HemAd£ed -81HeeOdIhNCf)HI 9LOOHNCOWE08 814819110110 NON 11 e8OdNOU OJOHNCON 814H9mAdOH -:1410aH10 OHNCOW W19d0loN N 8od01Necf) X19H8N1oJ8H W011Kd Kolee11N<oeodu0o 1414UedalO11J14 **8IHeao6911000I/I** "19H14u **1** N 19HN1111101 140H-mimed ('ttl N edgedeo elouoe 'I9HNIBUU) 80111018W X19Hh14UEed 014 X19HH0LI'8010JC14 'LOW 1118I4H8H9W14dU Ko1aeJ1410011 01h 101,01 a19H8I1Ne INOOhNJOUONg eH 814810Ha17£oe (aahhV£owdol)

U

9 9100HXd080U eH '1314He1J88duA 14 Kl1He1NU WONOUg o HI9HHOH1,1V900 10109h ldJJ19ue '£ K14HOhAU£14 NLHhO1014 HOWOLIOLJOBd 141odo10N 8 <sup>'</sup>Z **9100U0U K0100W14** 19£HIIU 14d1AH8 <sup>'</sup>eueidaiew 01AHH8HUOU198 oJah101Ad19u14Cf)oiae0 e14 A£HILT oAuNAu198 014fiey<dettoo 'eaiov\_IodioA oJONOenIl8euedalooNe t ed 1H91418ue 014hoged Hl9weeJeifdedu Ha\*edgo£N I,'Jwdc∎ <sup>†</sup> 1314H211BedUA 8LiOHJVO oJON09h14dIN9LfC OJah101A81010e1000 K14HehAU£14 N14HhOl014 01HOhAU£14 91010eh Ou 019w9eeliedioadau 14he cou WaiAu eН a eue14dalew OJati101AdiauwfJOlaoo £N £H14u xı IHINdegeJOUeW

eH 14he GOU WaiAu a eue 14dalew OJati 101AdiauwfJOlaoo £N £H14u xi IHINdegeJOUeW XI9HH90.10 IahO e£ 9H K019KU81oethAOO elaeh oJOHHauattoduo wa14H9hAu£14 14NhO1 a19H8141Ne 14NO8h14J0110149 eH 14148100811C08 WO1e 14dU eal000dioA oJONoahw1eeuedalooNeucped 1:114H8h8U 91oOH814JJIacf7(jDe ieem1980u OH9uel14HU000tt (Alaeh

ieem1980u OH9uel14HU000tt (Alaeh ou) H11Heh/CU614 91010eh ou x19waeeiedloedau I14HahAU£W 80NMHhO1O14 814H880£9u0001d

'o9100Hg000Uo
Hah101BN14HOdU HON00198oH laetleugo eodoioM
B1980 OJOH91J8E 14 OJOH14O W814H9hAUEW NNhOl
819H8141Ne 10O9h14JOIlON9 eH 141481014ettC08 Ndu
OHNCOO OHH9g000 Olh O11I3OXO3 OH 14NOah14J.NedU
a14H8hAU£14 8IO1Od1OA XNNoahM.aoueda1Olo(f)
X19H1008£14 1414He80£911o00I1

1du N xawaouoA XI9Hh19go a XI9doloN otl 14Nh0I a19He14JJle 1431O9h14JOUO149 eNfioleJauee oNogAui eH a14810Iet7EOE 91ee19£BNO 0)10101 a K14HahAU£N ON14HhOIO14 14100H1T10W 1514HOh14u88A ANhOI 01AH811J)IO 14NO9h14JOU014g eH 614H9hAU£14 NOIOU 9114h1u08A N e1HONt1BU 0119113 I14H8hAUEI OJONO8hH1eJdeHCO)1£14H KNH88OHN14HOdU AH149ALJJ 91Nh1411a8A 181UOB£OU Ole '1511H8hAU£11 elloxe **0100W 8 14HON1** 140N08h14J0110149 **914H9HI0DUA** (IHOWOUe 1411hoged BH W9141eNCOH 14 "0ONhAU14u 'Wod191oeuuoNHou OIHOWaue o,, WONoaou oJehoged 14Nheom/) vdu Koieoj14lootf ate) 19dAINHAuANe 14Nhol NowaenAugo 1,114Hau8edueH 8 I14Haueetl Wom9110geH 14du aNCetl 10e8lhaUOagO e1H914hou AUal 0JatT101eJouvdu e1HOWOUe OJahoged N1oOHXda8OU eWdocO KeuNAu198 <sup>°</sup>80198h 1WKN11OHN9WON 14141I9Hh14116ed

N Nel elaeh Og1U-OJONBN 010030 NON 'O8e1000 OJOH9uodjNauo oJowaAgedi 161814HehAuC14 HOC NUN Neh01 xlgH814J)Ie 14)IO9h14JOUO149 ON9UON09H eH I1481009t1E08 OJOHH9W9d8OHttO е£ lahO K14H0h0U 9100H814J019Cf1Cf3e IOKUO8£OU 91NO19aou e810Hod10A 141oeh 14ehOged K14t1NAd1oHON aeNeJ.

'HOE NUN Nehol XIgHHedg198 1,414t1Nood0 XI9HN(ONOH XBHOE 8 Kd191oeUuoNt au ol9tnowou o HOloWKUUadNe£ 'elHawaue OJahoged NH8UU9d)BE 0108W 8 19HO£ NUN NNhOI HOHBNINO INIO9h14J0U0149 **N14H0U9edUGH** 8 K14H8hAUEI WAW140NOW 14 8IHehAUE14 eONIHhO1014 0114hO0N14Cf) eihtoe814haU0ago 191HOW8ITe ONhoged '1514HOhAue14 N14HhO1014 HatneWeed 14odoloN 8 019100U0U 0 eueIdaleW OJehloiAd19umcbolaeo **A£HNU** OIAUNAUI98 OIAHINdegeJOUeW 9890 8 1I1\*datloo 14111 00900 leLSU9elo1]adu HI9t1NCe~l 1H01419ue HNhoged BIHO1411eu 01101 OH x19WaKWadNee 801H9W8u6 X14hOgOd X19HH91410 £14 11401000 891000d10A 1410eh IehOged

I1hNAdIoHON eei000dioA WOWa1UBto£ 9 (69 N Z861. 'IHIdu8dU 'W 191lado a19H1AW cadet, K11HehAU£14 K14H08OHNIH0dU 1:114H0U140A 9100HNCOWEO9 'b"J HK9deNoy) iaeloedeoe OH9u91HhOHE K14H0hAUE14 K14H88OHN14HOdU eH14gAUJ 14HEN1 ON08h14JOUO149 141IHOHIODUA 1dU (6861 eNAeH :OH14h141I9W 14 1414JO11o14g 8 ON14IOOHJB1411 <sup>'</sup>'gg 'Ulf HtlNhOgAm HNhAj deHd9eelj

73

C

 $\cap$ 

99 'KNHahALBN NNNodloedeu! 1010eh! 9HO£EUeII1 eN14HhO1014 e£) Hehed£odU!Ue1dalev!o1Nh1aAdlaum!oleeo KlHehAue11!8101Oeh ou W19Wee8Nedlaadeu HeHUOUI9e NNHhOION KNHehAUEN 09 wal! Koeethoien14ulo L'U ou oal000dlo/(! 'g 'eill<sup>9</sup>daou!eetnoleN(edlo **0H90BHBH** 'e1Hevheu ALIBI!N!oiA!TIOIBJa1114du!OH '19£HNU!alooHXdeeou EH!K14H8hAUE14!WON14HhOlON 0101 eB8IglegedI98 1IJdeHe woeoieeo K1/He80£9L000N 9b 14100He14J)la44el101Heml98oulolquahlo olh wat! KOaahloleh141110 L'U ou oaloilodlo/( 'Z KI1HehA11EH N14Hho1014!HeN(OUOUOed!lodoloN!B **Ol910OHUOU** o!eueidalew!OJafio1Ad19U14cpole8o!£N!19£H14u MoHI14degeJoueW!NOUNAulla!OJ14el8!N!WISHHe110 at' H9H000198! xi! doloi! £14! NI9t1N(eN 1,11AE1HeWe11e 0H9U8114HU000d OHON(g8HO NWNhOged Ν BN11HhOlO14 KNHehAUE14 14100Hh10W K14Hehl,1UBBA! Eag! B1H814heU! OU81! 8! K14HehAUE14 B11HeBOHNI1HOdU!19H14gAUJ!1614HehN1188A!N!BBBIO00 **OJOHNNLI£ed** OJOH9uedfleuo w814HehAUEN 99 14111 N8h01 XIgHBNJ>IB NN08h14JOu0Ng 0HHewedBOHt10!1514HahALfgO!lahO!e£!K14HOhOU ∬100He14JJlel!(fle KNHemlgeou!oiauah!o 01h W81!I50I111 11TIOIBhNU10 KNHauaeduA!N!iSI1He114u W0)1011g o 019HHe£1580!I1N08hNdnleLJe ISIHehAU£I1 NNHhOlOII viwtneN(detloo 11-lawaie I1Nhoged elHallheuleia1! CH!~twwaKUUadNeeleetnoleholuNe NNuedalooNaua)ad! Hutt! oa1ojlodlo / : KI4Heiedgocw OLIMNOoq **1514HOhAUE1,1** BN14HhO1011!KUBIC)Kdatl!-ANhol 9Z olAwaehAugo! CH! OJah101et1eu KNHehALcC14!eNOlou KI1HehNUa8A! 14! KI4HehAU£N! KNHGBOHNNHOdU ewHeml980u 19H14aAUJ leeeiheuoego Olh 81H8W0Ue oJehOged!K14Hauuad)1eClawe B 11H8N1!0ON08h14JOUO1,19!K110114H1OUuA!--NNh01!0OHBN1>I8!IINO9h14JOUOIg N1HBUBedUEH ΟZ e e1H3hAu£l!oietnolAdwoANocp!'Kualewedlo quad! 14! K14119dNou! oietnoleN(edio! 114H808HEH! 14du (19eH1411!NBfioledNgoa!9uod)!14NhO1!00HB141Ne NNOahlJOU014q 0oweehA11gO 111,1HOUBedu8H 8! NOIoU! 0BOlaeo! 91NhlLeeA! oJetnolluoe£ou eNhAU K14HehAUC14 811He8od14wdoci 0JetTIOIKU8100tn/coO elHBWo1fe!OJONOahIIUO!-'elaeh!olowaAgedl K1,1H8hAlJEN KNHehAuOU!BUtl!(ed19umtoleeo 9uod)! KWH8hAuem! oivhedlculc! olAH9uedlNauo oJetnáKU81oetAoO 81H3W8ue!OJO)IOah141UO!-::11NhNHA(#7!OHHBWadeOHdO!lebHUOUlgB e910olOdloA 1108h 0l9hOqed KNhNAd1oHol KBHHaN(oul18du 'wo£edgo w14NeJ KNH14WOIUB 'deWNdueH euueleW KNH8UI9UEH 141Ot1018W

OHOUBOIOJ£14!=wag!18N(OW!19£H1411!14100HXdeBOU

algHgo!lou vim! N! ou)alo! O0NO3hIIHEJdO

loeuuodol()) 1NHOgé!91NN(Au0!lemon 1°ICH14U

geeduo! Hull! woue1de18! J! ouialo! 8o) Oah14H8Jdo

3OH1081 de!1du8H!9114N(Auo!1aN(ow!19£H14U

'19ueldaleW

el119d)Ou aatnolewed1O

wo1Je1daleW wvtnolAd1911Ntp01e83 '(elaeh!OJ8H140 WBNHOhO1LOl011 o119WNi118 1,1h0U H068UEN17 gone woeedg0!N114Ne1!lseel9dNedeu e1a8h OJOHOedN 01) **OJOHBUBE** 10 1309115HBWE14!10N(O11!N BLILfe10I1dN I.11gthKeN Voxedeu oJehloleNelodu coder, '8N01!0JONOahIIdINaue! 19Hwhlnuae 10 114014BBE e111J81o1dN!OJONel KNH8hAU£N!10eh UUE10NdM III 1BONNH1108odUAUOU O10H11oxedeux,!atl NIgHqueloNe114Ue on 98e1UEJot1II oo, Tan(OW KNH3hAU£14 91NN(Auo BN14HhOION oJOwaeBHedloadau!88108heN '3-09-9-H WQ BUWEU KBHd011e14HNWXd890 KV1Hee141JENEH 'eHe8oe<sup>q</sup>uouoL 'daw14dueH 9119g 18N(OW XelHBWOU€ xlhoged X19HHeM(OUttodŪ BONNHhOION OBlooheN s 8'14HahALf£14 '81181!XENIOehA!XNJAdti eH EHaueloatnAoo 9119g taNrow!edA1o'ahodu BBOdNOU DJOHN(ON o 10IEWNHO OJah BUOOU **I91H3WOUe** 01,1hOged W318 'K14H3hALfC14 £ 80N14HhOloII 10 ISNHEINU O1/1HOhOlUN10 N141lole8Nh300ag0 UEHJNO 1ae8191eged199 1HeWadB euBBda1HN 9Ualee0d14wdocD KNHahA11£N BONNHh01014 Igloged I9WwedJodu!140HHe11e£!I51,1HehHONO OUOO1J 'KNH3LfeedUA 17 8NOU9 a19uAU!eH!1:5018e8NLIBeHelOA!oJodoloN!Ridged ewwedJodu!'wodoleiAwwo)i!w19waAd14wwedJOdu ıol01Lrat1eduo KNHOhAUE14 BON14HhO1ON '14NOOh141ewOlee NO17Kd01J кі 1Hah01UN8 Kol8KUB1oatnAoo 9100H9ueleeOtlauoOU X14!N!HOC!NUN!NehOl!XI9HB1.1JJle!IINOah14JOUOV1g KNHehAugo ooehodU Icloaed eueh8H et1HEWON KOIOBtIOU M01181ehAUE14!19loged ew14W0d!0JOW111Y0Xg0OH!KI1He1V1U!N!KNH8Lf8edUI b e)loug a1911Au CH!101N80HelOA!eiroo!J 19Huoelo1oh1AJag Y119HEedoOBNIOdU-1419H09uAUWN 'ııı<sup>9</sup> H eedaH10-NI9! HogwAu w N NIgH819dadUeH) K14HOhAUE14 90N14HhČlON <sup>g</sup>logéd wvÑ(ad!'KN810!8II£oB 14H3Wad8 Ue8d81H11 AHO£ NUN ANhOI EH OJatnolAalooetteoe!1:5I/H3hALfC14!14100H9NOH31H14 101e814118BHe10A **KNHelNO** 9HaeodA N!K1HelBed0A 17 mug!a19uAu CH 'lgH0e NUN! NNhO!! O19HBN1Ne! NNOahIJOUOlg! alaHHedgl98 191HeWa1Je ONhOged!014h101Ae101881000 101e8111188He10A!'AHOE!NUN!ANhol!olAHHedg198 OIAthleN eH OJ0tnOIA81011.10VEO8 K14HahAU£14 loled1g1<sup>g</sup>8 188h 'K1.la10!atleo8 tlolaw N!KNe10Net1£08!NOt1Kd0U 0181ooat1£0B!aleeeNo OINII OXgOOH a19dOION CH E1H8Nt1EU 01131 EH!IgHOE!NU14!14NhOI!919H8141J1E!14NO3h14JOUO149 loledig198!ehede!wKNhetlHawoNad!OHOBLJO3 woeedgo!wNtnolAtiauo!108109ed Kull NNUedeloONauciDad oei000dlo,c Z'JNC)!8Fi!OHB£BNOU!)IBN L eeeduo e!K091KUUadNe£!10N(Ow!!!E£HNÚ!KNHBUUadN XN ealogotlA KUII £H14U!x19HIIdegeJOUew Ndi el119d)ou NNHeeocau000N

e HeN11eu

Auel

19EH14U

OH0O8HEH

N 0N80He10A! Ndu!olAtnoleJauidu!aH

OOtnoIBN<Bd10

# 1 3 8P8ZZ 1i, n